AGENCY REGULATORY NOTICE

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's (or your) authority to operate the equipment. Only peripherals (digital input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this monitor. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Only shielded Signal Cables may be used with this System.

Canadian D.O.C. Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE Conformity Notice

Products with the “CE” Marking comply with the EMC Directive(89/336/EEC) and LOW VOLTAGE Directive (73/23/EEC) issued by the Commission of the European Community.

Compiance with these directives implies conformity to the following European Norms :

- EN 55022 ; Radio Frequency Interference
- EN 50082-1:1992 ; Electromagnetic Immunity
- EN 60555-2 ; Power Line Harmonics
- EN 60555-3 ; Voltage Fluctuations
- EN 60950 ; Product Safety

Environmental Labelling of Personal Computers

Congratulations! You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and to the further development of environmentally-adapted electronic products.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem as far as computers and other electronic equipment are concerned is that environmentally harmful substances are used both in the products and during their manufacture. Since it has not been possible so far for the majority of electronic equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from both the working and natural environment viewpoints. Since all types of conventional electricity generation have a negative effect on the environment (acidic- and climatic-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronic equipment in offices consumes as enormous amount of energy, since it is often routinely left running continuously.

What does labelling involve?

This product meets the requirements for the TCO'95 scheme, which provides for international environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturckyddsfˆreningen (The Swedish Society for Nature Conservation), and NUTEK (The National Board for Industrial and Technical Development in Sweden), and SEMKO AB (an international certification agency).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern, among other things, restriction on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons), and chlorinated solvents. The product must be prepared for recycling, and the manufacturer is obliged to have an environmental plan, which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level, in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, along with physical and visual ergonomics and good usability.

The following is a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development Unit
Linnegatan 14, S-11494 Stockholm, Sweden
FAX +46-8 782 92 07
E-mail (Internet): development@tco.se

Current information regarding TCO'95 approved and labelled products may also be obtained on the Internet using the address:
http://www.tco-info.com/
TCO'95 is a co-operative project between:

Naturskydds föreningen

NUTEK Närings- och teknikutvecklingsverket

SEMKO

TCO'95 Environmental Requirements

Brominated flame retardants are present in printed circuit boards, cabling, casings, and housings, and are added to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame-retardant substances. These are related to another group of environmental toxins, PCBs, and are suspected of giving rise to similar harm, including reproductive damage in fish-eating birds and mammals. Flame retardants have been found in human blood, and researchers fear that they can disturb fetus development.

Bio-accumulative TCO'95 demands require that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine or bromine.

Lead can be found in picture tubes, display screens, solder, and capacitors. Lead damages the nervous system and in higher doses causes lead poisoning. The relevant bio-accumulative TCO'95 requirement permits the inclusion of lead, as no replacement has yet been developed.

Cadmium is present in rechargeable batteries and in the color-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The color-generating layers of display screens must not contain any cadmium.

Mercury is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm of mercury and that no mercury is present in any of the electrical or electronic components concerned with the display unit.

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacture of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the atmosphere, causing increased reception on Earth of ultra-violet light with consequent increased risks of skin cancer (malignant melanoma). The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during the manufacture of the product or its packaging.

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1 **Bio-accumulative means that the substance accumulates within living organisms.**

Shipping Package

The packaging material can be recycled, or you can save it to return the monitor to a service center for repair or disposal.

CFC Compounds in Distribution Packaging

Cushioning material used for shipping finished monitors are not manufactured with nor do they contain any CFC compounds.

Design for Disassembly/Recycling

These monitors have been designed for easy end-of-life disassembly and recycling. Fasteners are generally of the same type for efficient disassembly. Components made of different materials can be easily separated and plastics have been identified using international symbols to aid in recycling.

Monitor Disposal

WARNING

If you need to dispose of a monitor, ask a qualified service representative for the proper procedure. Improper disposal could result in personal injury from implosion.

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Introduction

Thank you for purchasing a high resolution monitor. It will give you high resolution performance and convenient reliable operation in a variety of video operating modes.

Features

- The monitor is a 15 inches (13.8 inches viewable) intelligent, microprocessor based monitor compatible with most analog RGB (Red, Green, Blue) display standards, including IBM PC®, PS/2®, Apple®, Macintosh®, Centris®, Quadra®, and Macintosh II family.
- The monitor provides crisp text and vivid color graphics with VGA, SVGA, XGA, and VESA Ergonomic modes (non-interlaced), and most Macintosh compatible color video cards when used with the appropriate adaptor. The monitor's wide compatibility makes it possible to upgrade video cards or software without purchasing a new monitor.
- Digitally controlled auto-scanning is done with the micro-processor for horizontal scan frequencies between 30 and 70kHz, and vertical scan frequencies between 50-160Hz. The microprocessor-based intelligence allows the monitor to operate in each frequency mode with the precision of a fixed frequency monitor.
- The microprocessor-based digital controls allow you to conveniently adjust a variety of image controls by using the OSD (On Screen Display).
- The monitor has 31 memory locations for display modes, 6 of which are factory preset to popular video modes.
- This monitor is capable of producing a maximum horizontal resolution of 1280 dots and a maximum vertical resolution of 1024 lines. It is well suited for CAD work and sophisticated windowing environments.
- For low cost of monitor operation, this monitor is certified as meeting the EPA Energy Star requirements, and utilizes the VESA Display Power Management Signalling (DPMS) protocol for power saving during non-use periods.
- For greater user health and safety, this monitor complies with the stringent Swedish TCO'95 requirements for low radiation emissions.

Monitor Registration

The model and serial numbers are found on the rear of this unit. These numbers are unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase. Staple your receipt here.

Date of Purchase : _____
Dealer Purchased From : _____
Dealer Address : _____
Dealer Phone No. : _____
Model No. : _____
Serial No. : _____

Notice
All rights reserved. Reproduction in any manner, in whole or in part, is strictly prohibited without the written permission of LG Electronics Inc.

Trademark Acknowledgments
LG is a trademark of **LG Electronics Inc.**
IBM is a registered trademark and **VGA** is a trademark of International Business Machines Corporation.

Warning : To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Avertissement : Ne pas placer cet appareil dans un endroit humide. Cela peut entraîner un incendie ou une décharge électrique.

Important Precautions

This unit has been engineered and manufactured to assure your personal safety, but improper use can result in potential electrical shock or fire hazard. In order not to defeat the safeguards incorporated in this monitor, observe the following basic rules for its installation, use, and servicing. Also follow all warnings and instructions marked directly on your monitor.

On Safety

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier.

If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

Operate the monitor only from a power source indicated in the specifications of this manual or listed on the monitor. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

Do not Open the Monitor

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the monitor is not operating properly.

To Avoid Personal Injury :

- Do not place the monitor on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.
- Do not try to roll a stand with small casters across thresholds or deep pile carpets.

To Prevent Fire or Hazards:

- Always turn the monitor OFF if you leave the room for more than a short period of time. Never leave the monitor ON when leaving the house.

- Keep children from dropping or pushing objects into the monitor's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this monitor.
- During a lightning storm or when the monitor is to be left unattended for an extended period of time, unplug it from the wall outlet.
- Do not bring magnetic devices such as magnets or motors near the picture tube.

On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the monitor where the power cord is subject to damage.

Do not use this monitor near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Monitors are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the monitor on a bed, sofa, rug, etc.
- Place the monitor in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the monitor near or over a radiator or heat source.

On Cleaning

- Unplug the monitor before cleaning the face of the picture tube.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the picture tube because overspray may cause electrical shock.

On Repacking

- Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

Connecting the Monitor

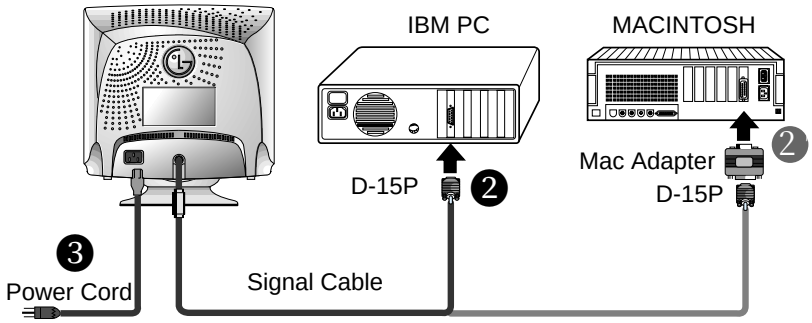
On the back of the monitor are two plug-in connections; one for the AC power cord, and the other for the signal cable from the video card.

1. Power off both the monitor and PC.
2. Connect the 15 pin VGA connector of the supplied signal cable to the output VGA video connector on the PC and the matching input connector on the rear of the monitor. The connectors will mate only one way. If you cannot attach the cable easily, turn the connector upside down and try again. When mated, tighten the thumbscrews to secure the connection.

2. Locate the appropriate MAC to VGA adapter block at your local computer store. This adapter changes the high density 3 row 15 pin VGA connector to the correct 15 pin 2 row connection to mate with your MAC. Attach the other end of the signal cable to the side of the adapter block with 3 rows.

   Connect the attached adapter block/signal cable to the video output on your MAC.

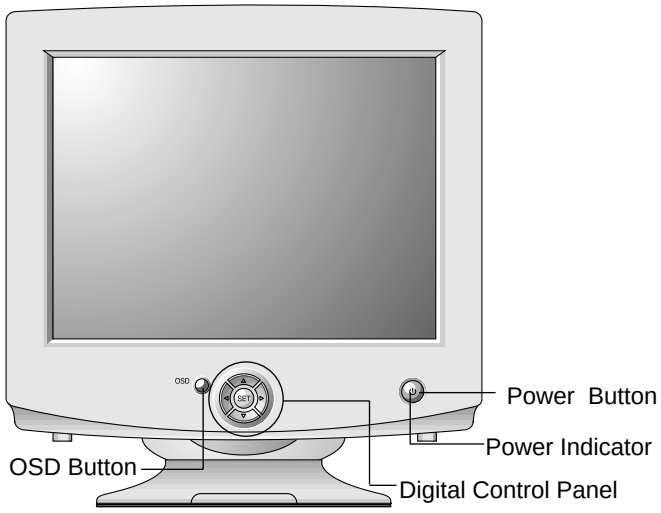
3. One end of the AC power cord is connected into the AC power connector on the back of the monitor. The other end is plugged into a properly grounded three-prong AC outlet.
4. Power ON the PC, then the monitor.
5. If you see the **SELF DIAGNOSTICS** message, check the signal cable and connectors.
6. After using the system, power OFF the monitor, then the PC.



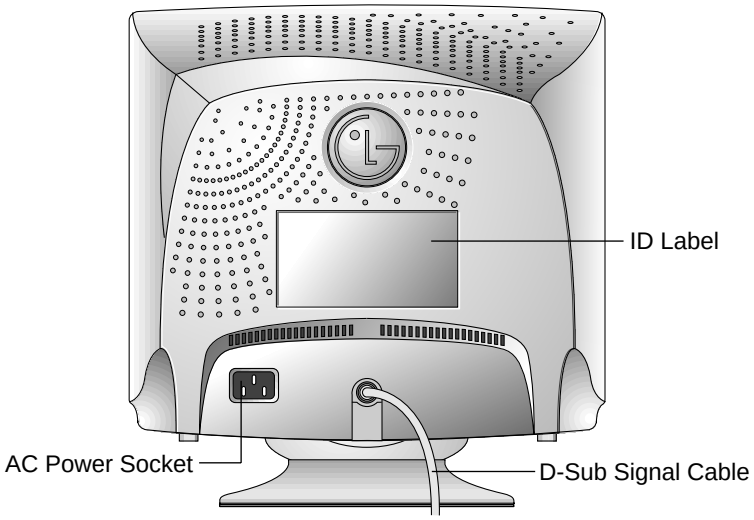
* **NOTE :** For Apple Macintosh use, a separate plug adapter is needed to change the 15 pin high density (3 row) D-sub VGA connector on the supplied cable to a 15 pin 2 row connector.

Location and Function of Controls

Front View

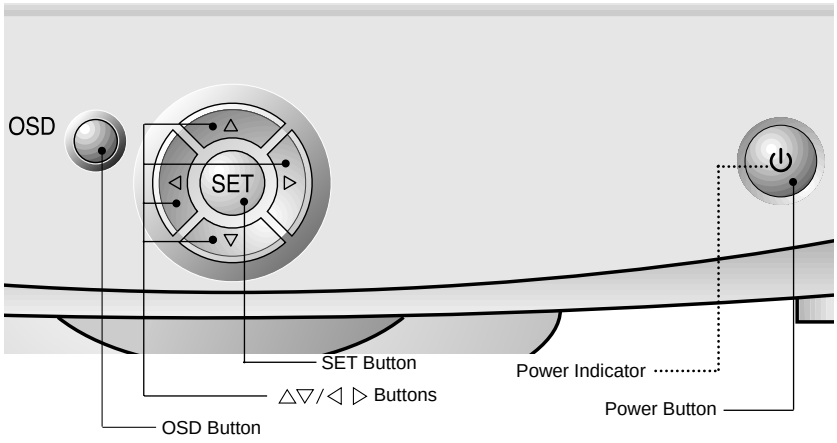


Rear View



Control Panel Function

Front Panel Controls



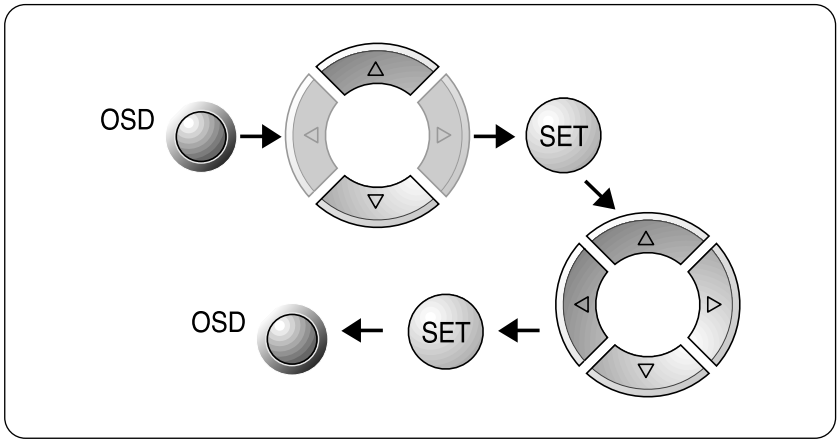
Control		Function
OSD	**OSD Button**	Use this button to enter or exit the on screen display .
	△▽/◁ ▷ **Buttons**	Use these buttons to choose or adjust items in the on screen display.
SET	**SET Button**	Use this button to enter a selection in the on screen display.
	Power Button	Use this button to turn the monitor on or off.
	Power Indicator	The power indicator light is shown in the power button. This indicator lights up green when the monitor operates normally. If the monitor is in DPM (Energy Saving) mode (stand-by/ suspend/power off), this indicator color changes to amber.

On Screen Display (OSD) Control Adjustment

Making adjustments to the image size, position and operating parameters of the monitor are quick and easy with the On Screen Display Control system, using only the Enter button and Adjustment Control buttons. A quick example is given below to familiarize you with the use of the controls. Following this section is an outline of the available adjustments and selections you can make using the OSD.

Note : Allow the monitor to stabilize for at least 30 minutes before making image adjustment.

To make adjustments in the On Screen Display, follow these steps:

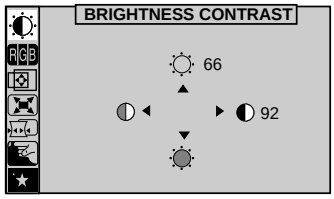
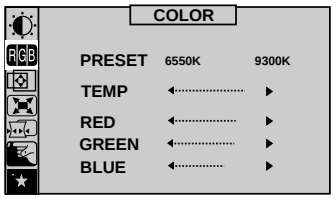
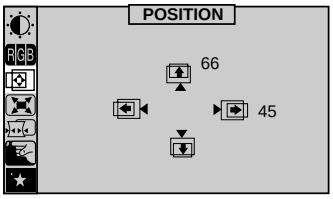


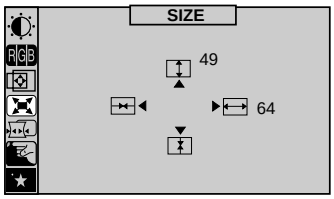
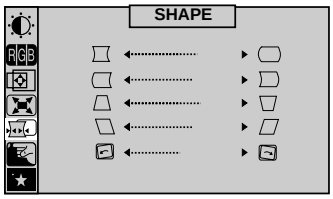
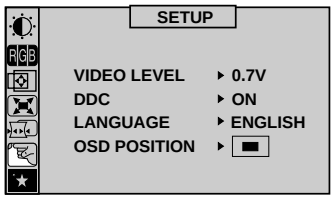
1. Press the **OSD Button**, then the main menu of the OSD appears.
2. To acces a control, use the △ or ▽ **Buttons**. When the icon you want becomes highlighted, press the **SET Button**.
3. Use the △▽/◁ ▷ **Buttons** to adjust the item to the desired level.
4. Accept the changes by pressing the **SET Button**.
5. Exit the OSD by Pressing the **OSD Button**.

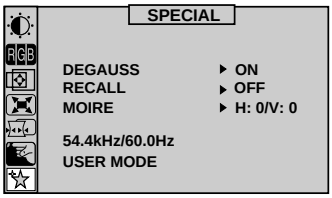
On Screen Display(OSD) Selection and Adjustment

You were introduced to the procedure of selection and adjusting an item using the OSD system.

Listed below are the icons, icon names, and icon descriptions of the items that are shown on the Menu.

OSD Adjust	Description
	**Brightness** Used to adjust the brightness of the screen. **Contrast** Adjust the display to the contrast desired.
	**PRESET** **6550K/ 9300K** To appear the displays color temperature. • 6550K:Slightly reddish white. • 9300K:Slightly bluish white. **TEMP** User easily color set without adjustment Red, Green and Blue (R/G/B). **RED** To set your own color levels. **GREEN** To set your own color levels. **BLUE** To set your own color levels.
	**Vertical Position** To move image up and down. **Horizontal Position** To move picture image left and right.

OSD Adjust	Description
	**Vertical Size** To adjust image height. **Horizontal Size** To adjust image width.
	**Side Pincushion** To correct the bowing in and out of the image. **Side pincushion balance** To correct the balance of both sides bowling. **Trapezoid** To correct geometric distortion. **Parallelogram** This control adjusts for a skewing of the screen image. **Tilt** To correct image rotation.
	**VIDEO LEVEL** To select input signal Level.(0.7V/1.0V) **DDC** To select the DDC function.(ON/OFF) **LANGUAGE** To choose the language in which the control names are displayed. **OSD POSITION** To adjust position of the OSD window on the screen.

OSD Adjust	Description
	**DEGAUSS** To manually demagnetize the screen which may show some image or color incorrectly.
	RECALL If the monitor is operating in a factory preset mode, this control will reset the image to the factory preset mode. If the monitor is operating in a user mode, this control has no effect.
	MOIRE This item allows you to reduce the moire (Moire is caused by interference Horizontal Scan Line with the periodical dot screen). It is normally **OFF**(H:0/V:0) The moire adjustments may affect the focus of the screen.

Video Memory Modes

The monitor has 31 memory locations for display modes, 6 of which are factory preset to popular video modes.

■ Display Modes (Resolution)

Mode	Display Modes (Resolution)		Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1	VESA	640 x 480	37.50kHz	75Hz
2	VGA	720 x 400	31.47kHz	70Hz
3	VESA	800 x 600	46.88kHz	75Hz
4	VESA	800 x 600	53.67kHz	85Hz
5	VESA	1024 x 768	68.677kHz	85Hz
6	VESA	1280 x 1024	63.98kHz	60Hz

■ User Modes

Modes 1-25 are empty and can accept new video data. If the monitor detects a new video mode that has not been present before or is not one of the preset modes, it stores the new mode automatically in one of the empty modes starting with mode 1.

If you use up the 25 blank modes and still have more new video modes, the monitor replaces the information in the user modes starting with mode 1.

■ Recalling Display Modes

When your monitor detects a mode it has seen before, it automatically recalls the image settings you may have made the last time you used that mode.

You may, however, manually force a recall of each of the 6 preset modes by pressing the Recall button. All preset modes are automatically recalled as the monitor senses the incoming signal.

The ability to recall the preset modes is dependent on the signal coming from your PC's video card or system. If this signal does not match any of the factory modes, the monitor automatically sets itself to display the image.

Energy Saving Design

This monitor incorporates new circuitry for lowering energy usage during idle time, following the Display Power Management Signalling (DPMS) guide lines of the Video Electronics Standards Association (VESA), and is certified as exceeding the EPA's Energy Star program for reduced power usage.

For the power savings feature to operate, the monitor must be used with either a PC having power saving circuitry. The monitor has three power-saving states, and the power saving operation is indicated by the power indicator on the front panel.

When the power indicator is green, operation is normal. When the power indicator is Amber, the monitor is in a power saving mode.

If the power indicator is Amber, press the power button to turn on the monitor. If the power indicator is Amber and you wish to use the PC again, move your mouse pointer or touch a keyboard button. When the monitor is not in use, save energy by turning it off.

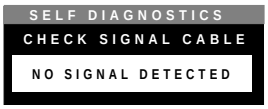
Power Consumption

Mode	Hori. Sync	Verti. Sync	Video	Power Consumption	LED Color
Normal(Max.)	On	On	Normal	≤ 100W	Green
Stand-by	Off	On	Off	≤ 15W	Amber
Suspend	On	Off	Off	≤ 15W	Amber
Off	Off	Off	Off	≤ 5W	Amber

Low Radiation Compliance (MPR II)

This monitor meets one of the strictest guidelines available today for low radiation emissions, offering the user extra shielding and an antistatic screen coating. These guidelines, set forth by a government agency in Sweden, limit the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

Self Diagnostics



This monitor can sense when there is a possible problem present, and informs you of this condition by presenting you with a **SELF DIAGNOSTICS** OSD. This OSD may pop up when it is On but no signal is detected. In this case the message **CHECK SIGNAL CABLE** will be high lighted, alerting you to check the signal cable connections.

DDC (Display Data Channel)

DDC is a communication channel over which the monitor automatically informs the host system (PC) about its capabilities. This monitor has two DDC function; DDC2B. DDC2B carries out uni-directional communication between the PC and the monitor. Under these situations, the PC sends display data to the monitor but not commands to control the monitor settings.

Note : PC must support DDC functions to do this.

If your monitor is displaying a mono chrome image or the wrong resolution, select the DDC OFF function.

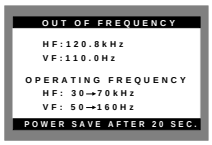
Troubleshooting

Self diagnostics message.

■ The signal cable is not connected.

OUT OF FREQUENCY message appears.

■ The frequency of the sync input is outside the operating range of the monitor.



***Horizontal Frequency: 30-70kHz**
***Vertical Frequency: 50-160Hz**

Use the graphics board's utility software to change the frequency setting (Refer to the manual for graphics board).

The power LED is illuminated amber.

■ Display power management mode.
■ There is no sync signal.
■ The signal cable is not fastened securely.
■ Check the computer power and graphics adapter configuration.

The image on the SCREEN is not centered, or too small, or not a rectangle shape.

■ Image adjustment not been done yet in the current operating mode. Use the **OSD**, **SET** and △▽/◁ ▷ buttons to set the image to your liking.

The monitor doesn't enter the power saving off mode (Amber).

■ Computer video signal is not VESA DPMS standard. Either the PC or the video controller card is not using the VESA DPMS power management function.

Note : If the power indicator(LED) light is blinking amber, may result in abnomal condition of the monitor. Then press a power button on the front panel control and call your service technician for more information.

Service

Unplug the monitor from the wall outlet and refer servicing to qualified service personnel when :

- The power cord or plug is damaged or frayed.
- Liquid has been spilled into the monitor.
- The monitor has been exposed to rain or water.
- The monitor does not operate normally following the operating instructions. Adjust only those controls that are covered in the operating instructions. An improper adjustment of other controls may result in damage and often requires extensive work by a qualified technician to restore the monitor to normal operation.
- The monitor has been dropped or the cabinet has been damaged.
- The monitor exhibits a distinct change in performance.
- Snapping or popping from the monitor is continuous or frequent while the monitor is operating. It is normal for some monitors to make occasional sounds when being turned on or off, or when changing video modes.

Do not attempt to service the monitor yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

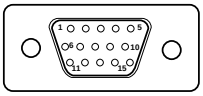
Specifications

Sync Signal Types

Type	H. Sync	V. Sync
Separate Sync	H. Sync	V. Sync

(N.C : No Connection)

Signal Connector Pin Assignment



Pin	Signal(D-Sub)	Pin	Signal(D-Sub)
1	Red	9	NC
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	SDA
5	Self-Test	13	Hori. Sync
6	Red Ground	14	Vert. Sync
7	Green Ground	15	SCL
8	Blue Ground		

Note :No. 5 Pin have to ground on the PC side.

Specifications

Picture tube
- 15 inches (13.8 inches viewable) FST, 90˚ deflection
- 0.28mm dot pitch, Non-glare, Darkface
- AR-ASC (Anti-Reflective Anti-Static Coating)

Sync Input
- Horizontal Frequency : 30 - 70kHz (Automatic)
- Vertical Frequency : 50 - 160Hz (Automatic)
- Input Form : Separate, Positive/Negative
- Signal input : 15 pin D-Sub Connector

Video Input
- Input Form : Separate, RGB Analog, 0.7 Vp-p/75 ohm, Positive
- Resolution : 1280 x 1024, 60Hz

Power Input
- 100-240VAC 50/60Hz 1.5A

Dimensions (with tilt/swivel stand)
- Width : 360.0 mm/14.2 inches
- Depth : 391.5 mm/15.4 inches
- Height : 389.5 mm/15.3 inches

Weight
- Net : 12.6kg (27.78lbs)

Environment
- Operating condition
  - Temperature : 10˚C to 35˚C
  - Humidity : 10% to 90% non-condensing
- Storage condition
  - Temperature : 0˚C to 60˚C
  - Humidity : 5% to 90% non-condensing

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